

## **Amendments to the Claims**

Claims 1-17. (Cancelled)

18. (New) An externally mixing burner having a burner head, at least one combustion gas tube and at least one tube for an oxygen-containing gas, wherein the burner head has outlet openings out of the combustion gas tube and out of the tube for the oxygen-containing gas, wherein gas inlet lines are provided for a combustion gas and for the oxygen-containing gas, each being connected to a source for combustion gas and/or for oxygen-containing gas, respectively, and wherein at least one gas inlet line opens eccentrically into a swirl chamber which is arranged between the gas inlet line and the combustion gas tube and/or between the gas inlet line and the tube for oxygen-containing gas.

19. (New) The burner according to Claim 18, wherein at least one of the gas inlet lines is divided into two lines upstream of the swirl chamber, wherein one of these lines opens eccentrically into the swirl chamber and the other of these lines opens directly into the combustion gas tube and/or into the tube for oxygen-containing gas.

20. (New) The burner according to Claim 18, wherein valves are provided in the gas inlet lines, in particular valves being provided in a part of the gas inlet lines in which at least one gas inlet line is divided into two lines, and wherein a control unit or regulating unit controls or regulates, respectively, a degree of opening of the valves such that a shape of a flame of the burner is adjustable.

21. (New) The burner according to Claim 20, wherein the valves are solenoid valves.

22. (New) The burner according to Claim 18, wherein the swirl chamber has a circular cross-section in a section perpendicular to a longitudinal axis of the combustion gas tube.

23. (New) The burner according to Claim 18, wherein the gas inlet line opens tangentially into the swirl chamber.

24. (New) A method for operating an externally mixing burner having at least one combustion gas tube and at least one tube for oxygen-containing gas, through which combustion gas and/or oxygen-containing gas flows to a burner head, wherein the combustion gas and/or the oxygen-containing gas is introduced eccentrically into a swirl chamber in which a swirl flow is impressed upon the combustion gas and/or the oxygen-containing gas and wherein the combustion gas and/or oxygen-containing gas is supplied to the combustion gas tube and/or the tube for oxygen-containing gas after leaving the swirl chamber.

25. (New) The method according to Claim 24, wherein a quantity of combustion gas and oxygen-containing gas supplied to the burner per unit of time through the swirl chamber and without the swirl chamber is controlled and/or regulated, wherein the combustion gas and the oxygen-containing gas are sent through valves wherein a degree of opening of the valves is controlled or regulated such that the burner produces a flame having a desired shape which is adjustable via a control and/or regulating unit.

26. (New) The method according to Claim 24, wherein the oxygen-containing gas is air.

27. (New) The method according to Claim 24, wherein the oxygen-containing gas is oxygen-enriched air.

28. (New) The method according to Claim 24, wherein the oxygen-containing gas is a gas having an oxygen content greater than an oxygen content of air.

29. (New) The method according to Claim 24, wherein the oxygen-containing gas is a gas having an oxygen content greater than 70 % by volume.

30. (New) The method according to Claim 24, wherein the swirl flow is impressed upon a flow of the combustion gas.

31. (New) The method according to Claim 24, wherein the swirl flow is impressed upon a flow of the oxygen-containing gas.

32. (New) The method according to Claim 24, wherein co-rotating swirl flows are impressed upon a flow of the combustion gas and a flow of the oxygen-containing gas.

33. (New) The method according to Claim 24, wherein contra-rotating swirl flows are impressed upon a flow of the combustion gas and a flow of the oxygen-containing gas.

34. (New) The burner according to Claim 18, wherein the burner melts metal or glass.

35. (New) A burner, comprising:  
a combustion gas tube;  
a first gas inlet line coupled to the combustion gas tube;  
an oxygen-containing gas tube;  
a second gas inlet line coupled to the oxygen-containing gas tube; and  
a swirl chamber, wherein the swirl chamber is disposed between either the first gas inlet line and the combustion gas tube or between the second gas inlet line and the oxygen-containing gas tube.

36. (New) The burner according to Claim 35,  
wherein the first gas inlet line includes a first portion coupled to the combustion gas tube and a second portion coupled to the swirl chamber;  
wherein the second gas inlet line includes a first portion coupled to the oxygen-containing gas tube and a second portion coupled to a second swirl chamber disposed between the second gas inlet line and the oxygen-containing gas tube;  
and further wherein a flow of gas is controlled from the first and second portions of the first and second gas inlet lines.

37. (New) A method for operating a burner, comprising the steps of:  
controlling a flow of a combustion gas to a combustion gas tube;  
controlling a flow of an oxygen-containing gas to an oxygen-containing gas tube;

swirling the combustion gas or the oxygen-containing gas in a swirl chamber; and

supplying the combustion gas and the oxygen-containing gas to the burner.

38. (New) The method according to Claim 37, wherein the steps of controlling the flow of the combustion gas and the oxygen-containing gas include the step of operating a valve.